

Amendments to the Claims:

If entered, this listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of forming self-aligned, anti-via interconnects in an integrated circuit device comprising:
 - providing a semiconductor substrate;
 - depositing a first metal layer overlying said semiconductor substrate;
 - 5 depositing an etch stop layer overlying said first metal layer wherein said etch stop layer comprises a tantalum containing film;
 - depositing a second metal layer overlying said etch stop layer;
 - depositing an anti-reflective coating layer comprising titanium nitride overlying said second metal layer;
 - 10 etching through said second metal layer, said etch stop layer, and said first metal layer to form connective lines;
 - thereafter etching through said second metal layer to form vias wherein said etch stop layer prevents ~~acts as an etch stop for~~ etching through of said first ~~second~~ metal layer;
 - 15 thereafter depositing a dielectric layer overlying said vias, said connective lines and said semiconductor substrate; and

polishing down said dielectric layer to complete said self-aligned, anti-via interconnects in the manufacture of the integrated circuit device.

2. (Previously Presented) The method according to Claim 1 wherein said first and second metal layers comprise one of the group of: aluminum, aluminum alloys, tungsten and copper.
3. (Original) The method according to Claim 1 wherein said semiconductor substrate comprises semiconductor devices in and on a silicon substrate covered by an insulating layer.
4. (Canceled)
5. (Canceled)
6. (Original) The method according to Claim 1 wherein said dielectric layer is deposited to a thickness of between about 5,000 Angstroms and 20,000 Angstroms.
7. (Canceled)
8. (Canceled)

9. (Currently Amended) A method of forming self-aligned, anti-via interconnects in an integrated circuit device comprising:

providing a semiconductor substrate;

depositing a first metal layer overlying said semiconductor substrate;

5 depositing an etch stop layer overlying said first metal layer wherein said etch stop layer comprises a tantalum containing film;

depositing a second metal layer overlying said etch stop layer;

depositing an anti-reflective coating layer comprising titanium nitride overlying said second metal layer;

10 etching through said second metal layer, said etch stop layer, and said first metal layer to form connective lines;

thereafter etching through said second metal layer to form vias wherein said etch stop layer prevents ~~acts as an etch stop for etching through of~~ said first ~~second~~ metal layer;

15 thereafter depositing a dielectric layer overlying said vias, said connective lines and said semiconductor substrate wherein said dielectric layer is SiOF (fluorinated silica glass), SiOC (C-substituted siloxane), amorphous SiC:H, MSQ (methylsilsesquioxane), porous materials, PPXC polymer (poly(chloro-p-xylylene), PPXN polymer (poly-p-xylylene), or VT-4 (tetrafluoro-p-xylylene); and

20 polishing down said dielectric layer to complete said self-aligned, anti-via interconnects in the manufacture of the integrated circuit device wherein said anti-reflective coating layer is a polishing stop.

10. (Previously Presented) The method according to Claim 9 wherein said first metal layer and said second metal layer comprise one of the group of: aluminum, aluminum alloys, tungsten and copper.

11. (Original) The method according to Claim 9 wherein said first metal layer is deposited to a thickness of between about 1,000 Angstroms and 10,000 Angstroms.

12. (Original) The method according to Claim 9 wherein said second metal layer is deposited to a thickness of between about 3,000 Angstroms and 10,000 Angstroms.

13. (Canceled)

14. (Canceled)

15. (Previously Presented) The method according to Claim 9 wherein said step of etching through said second metal layer to form vias has an endpoint at said etch stop layer.

16. (Canceled)

17. (Canceled)

18. (Currently Amended) A method of forming self-aligned, anti-via interconnects in an integrated circuit device comprising:

providing a semiconductor substrate;

depositing a first metal layer overlying said semiconductor substrate;

5 depositing an etch stop layer overlying said first metal layer wherein said etch stop layer comprises a tantalum containing film;

depositing a second metal layer overlying said first metal layer;

depositing an anti-reflective coating layer comprising titanium nitride (TiN) overlying said second metal layer;

10 etching through said anti-reflective coating layer, said second metal layer, said etch stop layer, and said second metal layer to form connective lines;

thereafter etching through said anti-reflective coating layer and said second metal layer to form vias wherein said etch stop layer prevents ~~acts as an etch stop for etching through of~~ said first ~~second~~ metal layer;

15 thereafter depositing a dielectric layer overlying said vias, said connective lines and said semiconductor substrate wherein said dielectric layer is SiOF (fluorinated silica glass), SiOC (C-substituted siloxane), amorphous SiC:H, MSQ (methylsilsesquioxane), porous materials, PPXC polymer (poly(chloro-p-xylylene), PPXN polymer (poly-p-xylylene), or VT-4 (tetrafluoro-p-xylylene); and

20 polishing down said dielectric layer to complete said self-aligned, anti-via interconnects in the manufacture of the integrated circuit device wherein said anti-reflective coating layer is a polishing stop.

19. (Original) The method according to Claim 18 wherein said first metal layer and said second metal layer comprise one of the group of: aluminum, aluminum alloys, tungsten, and copper.

20. (Original) The method according to Claim 18 wherein said first metal layer is deposited to a thickness of between about 1,000 Angstroms and 10,000 Angstroms.

21. (Original) The method according to Claim 18 wherein said second metal layer is deposited to a thickness of between about 3,000 Angstroms and 10,000 Angstroms.

22. (Canceled)

23. (Canceled)